



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/556,086	04/21/2000	Maxwell J. Wells	1702-1-3	7449

21171 7590 04/28/2005

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

FERRIS III, FRED O

ART UNIT	PAPER NUMBER
----------	--------------

2128

DATE MAILED: 04/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/556,086	Applicant(s) WELLS ET AL.	
	Examiner Fred Ferris	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20,22-24,26,27,29-31 and 33-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20,22-24,26,27,29-31 and 33-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

K

DETAILED ACTION

1. *Claims 1-43 have been presented for examination based on applicant's amendment filed 19 November 2004. Applicants have cancelled claims 21, 25, 28, and 32. Claims 1-20, 22-24, 26-27, 29-31, and 33-43 are currently pending in this application. The examiner has rejected claims 1-20, 22-24, 26-27, 29-31 and 33-43.*

Response to Arguments

2. *Applicant's arguments filed 19 November 2004 with respect to claims 1-20, 22-24, 26-27, 29-31, and 33-43 have been considered but are moot in view of the new ground(s) of rejection.*

Regarding applicant's response to 103(a) rejection: *The examiner withdraws the 103(a) rejection (Blum in view of Cluts) in view of applicants amendment to the claims and arguments file 19 November 2004. (Please see new grounds for rejection below)*

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. ***Claims 1, 2 and 10-17 are rejected under 35 U.S.C. 102(b) as being anticipated by "Automatic Audio Content Analysis", S. Pheiffer, ACM Multimedia 96', pp. 21-30, ACM 1996.***

Regarding claims 1, 10-13: Pheiffer teaches simulating (i.e. modeling human perception of music) the human perception of music (section 2.2, page 22, sections 3.2-3.3.2, page 23-24) inclusive of extracting numeric parameters from an electronic representation of musical recordings. (sections 3.3, 4.1, Figs. 5, 6) The examiner interprets this extraction process to be functionally equivalent to applicants claimed "extracting scalar descriptors numerically describing recorded music". Pheiffer also discloses a model that considers the likeness (i.e. similarities) between the extracted representation of musical recordings. (section 4.1, figs. 6-8) Pheiffer further discloses extracting numeric parameters from recordings and the use of weighting parameters (section 4.2, page 27-28 Tabs. 2, 3) to compute (calculate) the correlation between recorded sections (i.e. the stored numerical descriptors) and subsequently adjusting the weighting based on human perception (sections 4.1-4.2, 5.0, Tabs. 2,3). That is, Pheiffer suggests using a human's perception (and expectations) of a sound source (sound history) in modeling the effect on the descriptors of the music through use of matching based on human expectations (page 22, column 2, para: 3).

Per dependent claim 2, 14-17: Pheiffer would obviously inherently include a computer readable medium containing the computer program for performing the disclosed techniques for the simulation of music perception (Sections 3.1-3.3.2).

4. Claims 1-20, 22-24, 26-27, 29-31 and 33-43 are rejected under 35

U.S.C. 102(a) as being anticipated by "Content-Based Retrieval for Music Collections", Y. Tseng, SIGIR '99, ACM 1-58113-096-1/99/0007, ACM August 1999.

Per claims 1, 10-13: Tseng teaches a method and system for creating and searching a database of data records which are associated with music recordings. The method and system are based on a model formed from the perception of the music (page 180-181, section 4.0, tabs. 1-4, abstract, Section 1.0) as perceived by human subjects inclusive of extracting numeric parameters (i.e. descriptors) from an electronic representation of musical recordings. (page 177-178, Section 2.0-3.0, Fig. 1)

The model disclosed by Tseng also considers the likeness (i.e. similarities) between the extracted representation of the various musical recordings. (page 179, section 3.0) Tseng further discloses extracting numeric parameters from recordings and the use of weighting parameters (page 179, col. 1, para: 2, section 3.0) to compute (calculate) the correlation between recorded sections (i.e. the stored numerical descriptors) and subsequently adjusting the weighting based on human perception (page 180-181, section 4.0, tabs. 1-4). That is, Tseng teaches using a human's perception of a sound source in modeling the effect on the descriptors (parameters describing the music and recording database) of the music through use of matching based on human evaluation (page 180, col. 2, para: 1-3).

Per dependent claims 2, 14-17: Tseng would obviously inherently include a computer readable medium containing the computer program for performing the disclosed techniques relating to music perception and a database of music recordings (Sections 3.1-3.3.2).

Per claims 3, 5-7, 18-20, and 26: As cited above, Tseng teaches a method and system for creating and searching a database of data records which are associated with music recordings. (Fig. 1) The method and system are based on a model formed from the perception of the music (page 180-181, section 4.0, tabs. 1-4, abstract, Section 1.0) as perceived by human subjects inclusive of extracting numeric parameters from an electronic representation of musical recordings. (page 177-178, Section 2.0-3.0, Fig. 1) The model disclosed by Tseng also considers the likeness (i.e. similarities) between the extracted representation of the various musical recordings. (page 179, section 3.0) Tseng further discloses extracting numeric parameters (i.e. descriptors) from recordings and the use of weighting parameters (page 179, col. 1, para: 2, section 3.0) to compute (calculate) the correlation between recorded sections (i.e. the stored numerical descriptors) and subsequently adjusting the weighting based on human perception (page 180-181, section 4.0, tabs. 1-4). Tseng also teaches identifying data records associated with a music recording in a computer readable database (Sections 3.0-4.0, Tabs 2-4, Fig. 1) based on numerical parameters (descriptors) describing the music. Tseng therefore teaches using a human's perception of a sound source in modeling the effect on the descriptors (parameters describing the music and recording database) of the music through use of matching based on human evaluation (page 180, col. 2, para: 1-3).

Per dependent claims 4, 8, 9, 22-24, 30-31, 33: Tseng would obviously inherently include a computer readable medium containing the computer program for performing

the disclosed techniques relating to music perception and a database of music recordings (Sections 3.1-3.3.2).

Per dependent claims 27, 29, 34-43: This group of claims merely require that the numeric parameters include well-known musical attributes relating to dynamic range, loudness, harmony, rhythm, attack, tempo, note duration, key, etc. all of which would have been known to a skilled artisan at the time of the invention in addition to being taught Tseng (page 176, col. 2, para: 2-3, Fig. 1).

Conclusion

5. *The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, careful consideration should be given prior to applicant's response to this Office Action.*

U.S. Patent 6,201,176 issued to Yourio teaches listener music databases.

U.S. Patent 5,616,876 issued to Cluts teaches music content databases.

"Toward the Digital Music Library: Tune Retrieval from Acoustic Input", R. McNab, DL 96', ACM 0-89791-830-4-96/03, ACM 1996 teaches listener music databases.

"Content-Based Classification, Search, and Retrieval of Audio", E. Wold, et al, IEEE 1070-986X/96, IEEE 1996 teaches listener music databases.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 571-272-3778 and whose normal working hours are 8:30am to 5:00pm Monday to Friday. Any inquiry

Art Unit: 2128

of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 571-272-3700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached at 571-272-3780. The Official Fax Number is: (703) 872-9306

Fred Ferris, Patent Examiner
Simulation and Emulation, Art Unit 2128
U.S. Patent and Trademark Office
Randolph Building, Room 5D19
401 Dulany Street
Alexandria, VA 22313
Phone: (571-272-3778)
Fred.Ferris@uspto.gov
April 19, 2005

Fel 7
Av 2128